

Mentoring with social and emotional intelligence – the role of personal narrative

Bennett Goldberg, PhD
Director of the Office of Research in Higher Education,
Training and Evaluation
Professor of Physics and Astronomy

Northwestern University

Mentoring is important. Mentoring is not the *only* factor in trainee success but it is a *major determinant* in the likelihood of success. (Brunnsma et al., 2017)

National Institutes of Health, National Institute of General Medical Sciences
Annotated Bibliography for Training Programs
Program Evaluation, Professional Development, and Research Mentoring

<https://www.nigms.nih.gov/training/Documents/T32-Program-Eval-Prof-Dev-and-Mentoring.pdf>

Strong mentorship has been linked to:

- **Enhanced science identity, sense of belonging and self-efficacy** (Palepu et al, 1998; Garman et al, 2001; Paglis et al, 2006; Lopatto, 2007; Bland et al, 2009; Feldman et al, 2010; Cho et al, 2011; Chemers et al, 2011; Thiry and Laursen, 2011; Byars-Winston et al., 2015)
- **Persistence** (Gloria et al, 2001; Solorzano 1993; McGee and Keller, 2007; Sambunjak et al, 2010; Williams et al, 2015; Bordes-Edgar et al., 2011; Campbell and Campbell, 1997)
- **Research productivity** (Steiner and Lanphear, 2002; Wingard et al, 2004)
- **Higher career satisfaction** (Schapira et al, 1992; Beech et al, 2013)

Theories of Pathways

- **Social cognitive career theory**
 - Self-efficacy and outcome expectations drive interest; interest drives choice goals and actions; performance attainment provides feedback; contextual support and barriers are modifiers
 - Empirical support in STEM across race/gender
- **Science identity development and social negotiation**
 - Individual adopts professional identity from one own potential and others' recognition as potential scientist; drives career-related identity and future science-related behavior; how science identity intersects other identities is important
 - Three domains: Competence, performance, recognition
- **Social capital theory**
 - Social Network Theory, who has access, information, voice in the network
 - Mentors helps mentee in learning values and navigating disciplinary society

5 key attributes of effective research mentoring

- Research
- Interpersonal
- Psychosocial and career
- Culturally responsive/diversity
- Sponsorship

5 Key Attributes of Research Mentoring

1. Research:

Attributes for effective mentoring relationships	Measurable learning objective: <i>Mentors can</i>	Measurable learning objective: <i>Mentees can</i>
Developing disciplinary research skills	Teach mentees to design and carry out a research project; Provide opportunities to observe techniques	Develop the skills to design and carry out a research project
Developing technical skills	Provide instruction in core disciplinary research techniques	Commit to learning and gaining proficiency in disciplinary research techniques
Accurately assessing understanding of disciplinary knowledge and skills	Assess mentee learning of disciplinary knowledge and skills and provide feedback and guidance to address gaps	Self-assess learning of disciplinary knowledge and skills and respond to mentor feedback

5 Key Attributes of Research Mentoring

3. Psychosocial and career:

Attributes:

Providing motivation and facilitating coping efficacy

Developing mentee career self-efficacy

Developing a sense of belonging

Mentors can

Scaffold research work in ways that yield periodic success; celebrate the successes and offer support after failures

Foster and affirm mentees' career aspirations

Create a welcoming and inclusive research environment, especially at transition points

Mentees can

Acknowledge that research frequently involves setbacks and develop strategies to deal with them

Seek opportunities to explore and prepare for a career

Actively engage and establish relationships with research team members

Psychosocial mentoring

Examines individuals in the context of the combined influence that **psychological factors** and the **surrounding social environment** have on their physical and mental wellness and their ability to function.

- Emotional support
- Creation of mutual trust and respect,
- Development of social connections and capital
- Professional skills around resilience, working within an intercultural environment, and value alignment

1. The Science of Effective Mentoring in STEM (2019), from www.nationalacademies.org/MentorshipinSTEMM
2. Christine Pfund, Janet L. Branchaw, Melissa McDaniels, Angela Byars-Winston, Steven P. Lee, and Bruce Birren, *Reassess—Realign—Reimagine: A Guide for Mentors Pivoting to Remote Research Mentoring*, CBE—Life Sciences Education, Vol. 20, No. 1, <https://doi.org/10.1187/cbe.20-07-0147>

Social and emotional mentoring

- Guidelines and trust building
- The role of personal narrative
- Examples:
 - Story of my name
 - The Culture Box

Story of my name

- Take a few minutes, and write down the origin story of your name; jot down what the elements of your name mean to you
- In small groups, take turns sharing; use observational listening

Culture Box Activity

- A "culture box" are three physical objects that represent important parts of your life story, at least one of which is related to your social identities.
- The goal is to help others gain a better understanding of some of the experiences that have made you who you are, including joyous and/or difficult challenges.
- Take prudent risks to tell your story, but don't feel any pressure to reveal anything you don't wish, and have fun!
- Groups of 3 in breakouts; each person gets 3 minutes; practice observational listening

Key takeaways

- Psychosocial support critical for success
- Build trust through personal narrative
- Mutual understanding and connection drives skill development